claims.

I claim

1. A laminate oleophilic reformative clay, comprising:

a laminate area having a laminate structure; and

a plurality of oleophilic functional groups installed between gaps of laminates, and combined into the laminates by chemical bonds;

wherein a gap distance between the laminates are in a predetermined range for receiving the oleophilic functional groups; and

whereby installation of the oleophilic functional groups in the laminates reforms the clay.

2. The laminate oleophilic reformative clay as claimed in claim 1, wherein the predetermined range for the gap distance is from about 2.0 nm to 2.6 nm.

3. A method of production for laminate oleophilic reformative clay, comprising the steps of :

(1) using a water solution to expand lubricatively laminates of smectite clay;

(2) blending organic alkyl ammonium halogenated salt solution, as the reformative chemical, with the water solution of smectite clay under agitation for chemical reaction;

(3) after a predetermined period of time of blending under agitation, filtering the water solution to obtain a deposited sediment;

(4) washing the deposited sediment with water then drying the deposited sediment to obtain the oleophilic reformative clay.

4. The method of production for laminate oleophilic reformative clay as claimed in claim 3, further comprising, after drying the deposited sediment, grinding the deposited sediment to a particle diameter of 10^{-6} m for practical application.

5. The method of production for laminate oleophilic reformative clay as claimed in claim 3, wherein the organic alkyl ammonium halogenated salt is $C_{19}H_{42}NBr$ (Hexadecytrimethyl ammonium bromide).

6. An ABS nano-metric composite material, comprising:

an amount of ABS substrate; and

the laminate oleophilic reformative clay as claimed in claim 1;

wherein molecules of the ABS substrate extend into the laminate structure to connect tightly with the laminate oleophilic reformative clay; and

wherein the laminate oleophilic reformative clay is applied with a weight ratio of about 3-7% to be contained in the ABS nano-metric composite material.

7. The ABS nano-metric composite material as claimed in claim 6, wherein the laminate oleophilic reformative clay is produced by reforming smectite clay with alkyl ammonium halogenated salt.

8. A method of production for ABS nano-metric composite material,

comprising the steps of:

(1) dry blending a predetermined amount of ABS resin and the laminate oleophilic reformative clay as claimed in claim 1 with a 3-7 weight percentage;

(2) mixing the ABS resin and the laminate oleophilic reformative clay in a kneading machine under a predetermined shear force to spread the laminate oleophilic reformative clay uniformly in the ABS resin, a kneading temperature being set in a range of about 180℃ to 250℃;

(3) using a cutting tool to produce a plurality of blended pellets, a primary degree of ABS composite material being produced;

(4) kneading the primary degree of ABS composite pellets again for greater uniformity; and

(5) again using the cutting tool to produce a plurality of secondary blended pellets, a final product of ABS nano-metric composite material being produced;

wherein an air extraction device is employed in the first and the second kneading processes to avoid air bubbles in the pellets.

9. The method of production for ABS nano-metric composite material as claimed in claim 8, wherein the kneading temperature is set in a range from about 190℃ to 210℃ for a better kneading effect.

10. The method of production for ABS nano-metric composite material as claimed in claim 8, wherein the laminate oleophilic reformative clay is smectite clay reformed with alkyl ammonium halogenated salt.